

# **City of Alexandria, Virginia**



## **Community Rating System (CRS)**

### **Activity 510 Floodplain Management Plan (FMP)**

#### **Annual Report**

**2015 - 2016 Recertification Cycle**

## **I. Background**

As part of the City's participation in the Community Rating System (CRS) program administered by the National Flood Insurance Program (NFIP), the City of Alexandria adopted by Council Resolution No. 2496 the Northern Virginia Hazard Mitigation Plan (NVHMP) Update dated December 7th, 2011. In so doing, the City of Alexandria receives the following direct benefits:

- CRS credit under Activity 510 Floodplain Management Plan (FPM).

Currently, the NVHMP revision for 2017 is in draft form and is available for public viewing and comment at <https://www.alexandriava.gov/fire/info/default.aspx?id=49926>

In order to retain CRS credit for Activity 510 FPM, the City must prepare an annual progress report on the various activities Alexandria is performing as referenced in the Northern Virginia Hazard Mitigation Plan. This annual progress report is for the period October 1, 2015 through September 30, 2016.

In 2012 the City of Alexandria received a 5-year cycle visit on its CRS Program. During the cycle visit, CRS credit was approved for the following new activities:

- Activity 430 – STF, for staff certification as a Certified Floodplain Manager (CFM) and providing staff with education for same.
- Activity 510 – FPM, for adoption of the NVHMP.
- Activity 502 – RLAA, for conducting a repetitive loss area analysis and subsequent adoption.

CRS credit for these activities, as well as increased efforts in previously credited activities, resulted in a class change for Alexandria from a Class 7 to a Class 6. Policy holders in SFHA areas of Alexandria are now entitled to up to 20% discount on their flood insurance policy, up from the previous 15% discount at the former Class 7. The City's CRS Class 6 became effective October 1, 2013.

## **II. Annual Report Preparation, Distribution and Availability**

This annual report is prepared by Brian Rahal, the City of Alexandria Transportation & Environmental Services Department Civil Engineer IV/CRS Coordinator/Floodplain Manager. The annual report has been made available to the public on the City's website. A Copy of this report was also made available to the Commonwealth of Virginia's National Flood Insurance Program (NFIP) Coordinator's Office through electronic mail. The reader may obtain a copy of the annual report by electronic file download off the City of Alexandria web site, located here:

<http://www.alexandriava.gov/3516>

## **III. FMP Action Items**

The NVHMP, Chapter 7 – Jurisdiction Executive Summaries, starting on page 298, lists the mitigation action plan activities for the 2012 update:

### **Mitigation Action 1 (2006):**

Adopt revised FIRM.

#### **Responsibility**

City of Alexandria's Department of Transportation and Environmental Services.

#### **Funding**

The cost will be paid for from the City's operating budget through the Department of Transportation and Environmental Services. The funding provided will be used to integrate the use of the newly adopted maps into the major planning and development regulation practices.

#### **Status**

The status of this mitigation action was completed in April 2011 by City Council as Text Amendment No. 2011-0004 to City Ordinance No. 4715.

### **Mitigation Action 1 (2010):**

Excavate sediment from channel bed of Cameron Run - Hunting Creek to Potomac River.

#### **Responsibility**

Most of the area associated with this mitigation action plan is located outside the City of Alexandria city limits. The City is committed to pursue the initiation of a regional project that likely would include the following stakeholders:

- Fairfax County
- Virginia Department of Transportation
- The City's Department of Transportation and Environmental Services

#### **Funding**

Identified possible sources of funding include FEMA Unified Hazard Mitigation Assistance funding, United States Army Corp of Engineers, Virginia Department of Transportation, Fairfax County, and the City of Alexandria.

#### **Status**

The status of this mitigation action is ongoing. Fairfax County is actively engaged in the design process for a FEMA certified levee system to protect the Huntington Creek area along the south bank of Cameron Run (Hunting Creek). The City of Alexandria has engaged in discussions with Fairfax County over possibly including

the sediment removal from Cameron Run at the location identified into the project design scope. The project through Fairfax County is currently in Project Design Phase II which is scheduled to go through the winter of 2017. To date, Fairfax County officials reported that the findings of the US Army Corps of Engineers study, “Cameron Run Sediment Study” indicates that the majority of flooding events are not made significantly lesser by the removal of accumulated sediment. Hence, Fairfax County will not be removing sediment from Cameron Run. The Virginia Department of Transportation has also expressed that they will not perform dredging under the I-495 Beltway Bridge crossing for Cameron Run.

The City continues to periodically remove accumulated sediment from the stream bed of Cameron Run upstream of the I-495 Beltway Bridge and is actively pursuing a Joint Permit Application through the Virginia Marine Resources Commission for this activity to be conducted this fiscal year.

### **Mitigation Action 2 (2010):**

Identify and exploit the most effective tools for communications with the public during emergencies, including leveraging emerging technologies.

#### **Responsibility**

The City’s Department of Emergency Management.

#### **Funding**

The cost will be paid for from the City’s operating budget through the Department of Emergency Management and possibly through grant sources. The funding provided will be used to implement additional methods and technologies in communication with the public during emergencies.

#### **Status**

The City has maintained both text as well as voice communications systems for the community. We have added automated alerts from the National Weather Service to our system to warn the community. We have added to our communications capabilities the use of all social media systems over the past several years. In conjunction with all of the states and jurisdictions in the National Capital Region we are upgraded our systems to the newest technologies in alert and warning. Our stream monitoring system data is now being directly imported into our alert systems in order for us to pass along important information during flash flooding events.

### **Mitigation Action 3 (2010):**

Conduct annual outreach to each FEMA-listed repetitive loss and severe repetitive loss property owner, providing information on mitigation programs (grant assistance, mitigation measures, and flood insurance information) that can assist them in reducing their flood risk.

### **Responsibility**

The City's Department of Transportation and Environmental Services.

### **Funding**

The cost for repetitive loss property outreach will be paid for from the City's operating budget through the Department of Transportation and Environmental Services.

### **Status**

The status of this mitigation action is ongoing. This action item is also part of the Repetitive Loss Area Analysis adopted in 2012 and the subsequent annual progress report. As of May 27, 2015, one repetitive loss property at 1 King Street was made City property as part of a land swap deal with the Old Dominion Boat Club. City ownership of 1 King Street effectively removed that property from the repetitive loss list, thereby reducing the number of repetitive loss properties from eleven (11) to ten (10).

### **Mitigation Action 4 (2010):**

Promote structural mitigation to assure redundancy of critical facilities, to include but not limited to roof structure improvement, to meet or exceed building code standards, upgrade of electrical panels to accept generators, etc.

### **Responsibility**

The City's Department of Emergency Management.

### **Funding**

The cost for promotion of structural mitigation will be paid for from the City's operating budget through the Department of Emergency Management and the implementation of identified structural changes possibly through grant sources.

### **Status**

Our focus has been on developing emergency power for our critical infrastructure. We have completed electrical surveys of our critical infrastructure. Through the Department of General Services, City Council approved \$945,000 in Fiscal Year 2015 budget for proposed emergency generator projects included in the City's capital improvement plan and are now being installed. Additionally, City Council approved \$965,000 in funding for roof replacements in Fiscal Year 2016 and an additional \$1,110,000 in Fiscal Year 2017. City fiscal years begin on July 1 through June 30 of the next calendar year.

### **Mitigation Action 5 (2010):**

Review locality's compliance with the National Flood Insurance Program (NFIP) with an annual review of the Floodplain Ordinances and any newly permitted activities in the 100-year floodplain.

#### **Responsibility**

The City's Department of Transportation and Environmental Services.

#### **Funding**

The cost for the review of the City's compliance with the NFIP will be paid for from the City's operating budget through the Department of Transportation and Environmental Services.

#### **Status**

The status of this mitigation action is ongoing as the latest efforts for verifying compliance with the NFIP regulations and minimum standards are included in the annual recertification of the City of Alexandria in FEMA's Community Rating System (CRS).

### **Mitigation Action 6 (2006):**

Support mitigation of priority flood-prone structures through promotion of acquisition/ demolition, elevation, flood proofing, minor localized flood control projects, mitigation reconstruction and where feasible using FEMA HMA programs where appropriate.

#### **Responsibility**

The City's Department of Transportation and Environmental Services.

#### **Funding**

The cost for promoting mitigation of priority flood-prone structures will be paid for from the City's operating budget through the Department of Transportation and Environmental Services. Identifying all priority flood-prone structures is funded by Department of Transportation and Environmental Services Stormwater Management Capital Improvement Plan.

#### **Status**

The status of this mitigation action is ongoing. Since 2006, the City has engaged in the Storm Sewer Capacity Study, a citywide project that updates the City's storm sewer inventory and integrates that information into a hydrologic/hydraulic model to identify priority flood-prone storm sewer infrastructure. The project was completed in 2016. The City is now evaluating funding options for the \$60M+ in

recommended storm sewer infrastructure improvements and program implementation.

**Mitigation Action 6 (2010):**

Install warning signs in park areas subject to flooding.

**Responsibility**

The City's Department of Recreation, Parks & Cultural Activities.

**Funding**

The cost for installing warning signs in park areas subject to flooding will be paid for from the City's operating budget through the Department of Recreation, Parks & Cultural Activities.

**Status**

The status of this mitigation action is complete. Signs were posted at all entrances of the Dora Kelly and Holmes Run trails from just east of Van Dorn to Chambliss St. in 2011.

**Mitigation Action 7 (2010):**

Re-grade section of lower King Street, Union Street and The Strand to improve drainage and minimize flooding.

**Responsibility**

The City's Department of Transportation and Environmental Services.

**Funding**

The cost for a feasibility study and preliminary design is funded by Department of Transportation and Environmental Services CIP funding.

**Status**

The status of this mitigation action is ongoing. The City engaged in a preliminary design and feasibility study for re-grading sections of lower King Street, Union Street and The Strand. It was determined by this study that raising these streets was feasible only to mitigate minor nuisance flooding caused by tidal fluctuations in the Potomac River. Further study and implementation of recommended nuisance flooding mitigation is now part of the Waterfront Plan Implementation project currently under way. In the Spring of 2014, the Department of Transportation and Environmental Services installed a new elastomeric tide valve in the 36" outfall storm sewer pipe to block the intermittent tidal fluctuations from inundating the intersection at King Street and Strand Street. The tide valve now mitigates all nuisance flooding in this intersection for tides and tidal anomalies up to

approximately elevation 3.2'. Additional mitigation measures are included in the City's Waterfront Small Area Plan Implementation Capital Improvement Plan which includes a 10-year budget of \$63M.

#### **Mitigation Action 8 (2010):**

Construct an elevated walkway along Potomac riverfront to elevation 6.0 feet (NAVD88) to mitigate nuisance flooding.

#### **Responsibility**

The City's Department of Transportation and Environmental Services, Department of Recreation, Parks and Cultural Activities, and developer contributions will be responsible for the ultimate implementation of the Waterfront Small Area Plan; which includes the elevated walkway, or other mitigation measures, to control the inundation of low lying areas below elevation 6.0'. Implementation of all construction projects in the City are now the responsibility of the Department of Project Implementation.

#### **Funding**

The cost for design of City sponsored portions of the mitigation is funded by Department of Transportation and Environmental Services CIP funding. Further funding for construction of the Waterfront Plan Implementation project's flood mitigation design will be by Department of Transportation and Environmental Services CIP funding and developer contributions.

#### **Status**

The status of this mitigation action is ongoing. Further study and implementation of recommended nuisance flooding mitigation is now part of the Waterfront Small Area Plan Implementation project currently under way. For more information, see the Waterfront Small Area Plan Implementation's project website at:

<http://www.alexandriava.gov/Waterfront>

In May 2016, City Council approved the FY2017-FY2026 Capital Improvement Program that included \$63M over 10-years to fund this project.

#### **V. New Projects/Action Items or Revised Recommendations**

No new projects, action items or revised recommendations are included in this year's report.